

Application No. 10/655,162
Reply to Office Action of 09/27/2004

AMENDMENTS TO THE CLAIMS

1-20. (Cancelled)

21. (New) A process for producing a resin, comprising

reacting rosin with a terpene-phenol resin in the presence of a Bronsted acid, wherein the rosin is at least one member selected from the group consisting of wood rosin, tall oil rosin, and gum rosin.

22. (New) The process according to Claim 21, wherein the terpene-phenol resin has a softening point of from 125 to 150 °C.

23. (New) The process according to Claim 21, wherein the rosin and terpene-phenol are reacted together in a rosin:terpene-phenol weight ratio of from 40:60 to 60:40.

24. (New) The process according to Claim 21, wherein the rosin and terpene-phenol are reacted together in a rosin:terpene-phenol weight ratio of about 50:50.

25. (New) The process according to Claim 21, wherein the Bronsted acid is sulfonic acid, sulfuric acid, or mixtures thereof.

26. (New) The process according to Claim 21, wherein the Bronsted acid is para-toluene sulfonic acid, sulfonic acid, sulfuric acid, or mixtures thereof.

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27. (New) The process according to Claim 21, wherein the rosin is wood rosin.
28. (New) The process according to Claim 21, wherein the rosin is tall oil rosin.
29. (New) The process according to Claim 21, wherein the rosin is gum rosin.
30. (New) The process according to Claim 21, wherein the rosin is Chinese gum rosin.
31. (New) A resin produced by the process according to Claim 21, wherein the resin has a softening point of from 115 to 150 °C.
32. (New) A resin produced by the process according to Claim 21, wherein the resin has an acid number of from 10 to 85.
33. A resin produced by the process according to Claim 21, wherein the resin has a Mw of from 550 to 1400.
34. A resin produced by the process according to Claim 21, wherein the resin has a Mn of from 405 to 750.
35. A resin produced by the process according to Claim 21, wherein the resin has a neat Gardner color of from 6 to 12.

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36. A resin produced by the process according to Claim 21, wherein the resin has an acid number of from 10 to 50.

37. (New) A process for producing a resin, comprising
reacting at least one terpene with at least one phenolic compound to form a terpene-phenol resin; and then
reacting rosin with the terpene-phenol resin in the presence of a Bronsted acid, wherein the rosin is at least one member selected from the group consisting of wood rosin, tall oil rosin, and gum rosin.

38. (New) The process according to Claim 37, wherein the terpene is selected from the group consisting of limonene, dipentene, α -pinene, β -pinene, and δ -3-carene.

39. (New) A resin produced by the process according to Claim 37.

40. (New) A process for producing a resin, the process comprising
reacting rosin with a terpene-phenol resin in the presence of a Bronsted acid, wherein the rosin and terpene-phenol are reacted together in a rosin:terpene-phenol weight ratio of from 40:60 to 60:40.

41. (New) A resin produced by the process according to Claim 40.